

CLAIMS

What is claimed is:

1. A method for fumigating perishables within a refrigerated cargo container, wherein said refrigerated container comprises of a pair of front and a pair of rear drain holes, an air exchanger, a pair of doors located at the rear of said container, and a refrigeration system, said method for fumigation comprising:
 - checking said container for any damaged areas;
 - if damaged areas found, then sealing said damaged areas with a means for sealing said damaged areas;
 - placing at least one fan within said container;
 - clearing the pair of rear drain holes of said container;
 - inserting through one of the rear drain holes a gas introduction hose, then connecting said gas introduction hose to one of the fans earlier placed within said container or to the fan earlier placed in said container;
 - inserting through the other rear drain hole a plurality of reading lines for measuring the dispersion of fumigant within said container and an electrical line for powering said fans or fan;
 - positioning said reading lines within said container;
 - sealing the rear drain holes with a means for sealing the rear drain holes;
 - plugging the front drain holes with a means for plugging holes;
 - closing the air exchanger;
 - checking the temperature of the perishable to be fumigated;
 - determining the dosage of fumigant to be used in the fumigation process;
 - closing and securing the doors of the refrigerated cargo container;
 - releasing the fumigant required to fumigate through the gas introduction hose into said container;
 - checking with a gas or a halide detector the outside of said container for any fumigant leaks;
 - if leaks are discovered, then sealing the areas of said container found to have leaks with a means for sealing the areas found to have leaks;

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re-checking with the gas or the halide detector the areas of the container that were discovered to have leaks;

if leaks are controlled, then conducting the fumigation process; and

lastly, aerating the perishable fumigated for the required amount of time needed to clear the container of the fumigant used in the fumigation process.

2. The method for fumigating perishables within the refrigerated cargo container of claim 1, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
3. The method for fumigating perishables within the refrigerated cargo container of claim 1, which further comprises conducting a pressure test of said refrigerated container prior to the application of the fumigant.
4. The method for fumigating perishables within the refrigerated cargo container of claim 3, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
5. A method for fumigating perishables within a refrigerated cargo container, wherein said refrigerated container comprises of a pair of front and a pair of rear drain holes, an air exchanger, a pair of doors located at the rear of said container, and a refrigeration system, said method for fumigation comprising:
 - checking said container for any damaged areas;
 - if damaged areas found, then sealing said damaged areas with a means for sealing said damaged areas;
 - placing at least one fan within said container;
 - clearing the pair of front drain holes of said container;
 - inserting through one of the front drain holes a gas introduction hose, then connecting said gas introduction hose to one of the fans earlier placed within said container or to the fan earlier placed in said container;
 - inserting through the other front drain hole a plurality of reading lines for measuring the dispersion of fumigant within said container and an electrical line for powering said fans;
 - positioning said reading lines within said container;
 - sealing the front drain holes with a means for sealing the front drain holes;
 - plugging the rear drain holes with a means for plugging holes;
 - closing the air exchanger;

checking the temperature of the perishable to be fumigated;
determining the dosage of fumigant to be used in the fumigation process;
closing and securing the doors of the refrigerated cargo container;
releasing the fumigant required to fumigate through the gas introduction hose into said container;
checking with a gas or a halide detector the outside of said container for any fumigant leaks;
if leaks are discovered, then sealing the areas of said container found to have leaks with a means for sealing the areas found to have leaks;
re-checking with the gas or the halide detector the areas of the container that were discovered to have leaks;
if leaks are controlled, then conducting the fumigation process; and
lastly, aerating the perishable fumigated for the required amount of time needed to clear the container of the fumigant used in the fumigation process.

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6. The method for fumigating perishables within the refrigerated cargo container of claim 5, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
 7. The method for fumigating perishables within the refrigerated cargo container of claim 5, which further comprises conducting a pressure test of said refrigerated container prior to the application of the fumigant.
 8. The method for fumigating perishables within the refrigerated cargo container of claim 7, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
 9. A method for fumigating perishables within a refrigerated cargo container, wherein said refrigerated container comprises of a pair of front and a pair of rear drain holes, an air exchanger, a pair of doors located at the rear of said container, and a refrigeration system, said method for fumigation comprising:
 - checking said container for any damaged areas;
 - if damaged areas found, then sealing said damaged areas with a means for sealing said damaged areas;
 - placing at least one fan within said container;
 - clearing one of the front drain holes and one of the rear drain holes of said container;

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inserting through one of the cleared drain holes a gas introduction hose, then connecting said gas introduction hose to one of the fans earlier placed within said container or to the fan earlier placed in said container;

inserting through the other cleared drain hole a plurality of reading lines for measuring the dispersion of fumigant within said container and an electrical line for powering said fans;

positioning said reading lines within said container;

sealing the cleared drain holes with a means for sealing the cleared drain holes;

plugging the remaining drain holes with a means for plugging holes;

closing the air exchanger;

checking the temperature of the perishable to be fumigated;

determining the dosage of fumigant to be used in the fumigation process;

closing and securing the doors of the refrigerated cargo container;

releasing the fumigant required to fumigate through the gas introduction hose into said container;

checking with a gas or a halide detector the outside of said container for any fumigant leaks;

if leaks are discovered, then sealing the areas of said container found to have leaks with a means for sealing the areas found to have leaks;

re-checking with the gas or the halide detector the areas of the container that were discovered to have leaks;

if leaks are controlled, then conducting the fumigation process; and

lastly, aerating the perishable fumigated for the required amount of time needed to clear the container of the fumigant used in the fumigation process.

10. The method for fumigating perishables within the refrigerated cargo container of claim 9, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
11. The method for fumigating perishables within the refrigerated cargo container of claim 9, which further comprises conducting a pressure test of said refrigerated container prior to the application of the fumigant.
12. The method for fumigating perishables within the refrigerated cargo container of claim 11, wherein the refrigerated container is refrigerating the perishable during the fumigation process.

13. A method for fumigating perishables within a refrigerated cargo container, wherein said refrigerated container comprises of a pair of front and a pair of rear drain holes, an air exchanger, a pair of doors located at the rear of said container, and a refrigeration system, said method for fumigation comprising:

- checking said container for any damaged areas;
- if damaged areas found, then sealing said damaged areas with a means for sealing said damaged areas;
- placing at least one fan within said container;
- inserting through the air exchanger a gas introduction hose, then connecting said gas introduction hose to one of the fans earlier placed within said container or to the fan earlier placed in said container;
- inserting through the air exchanger a plurality of reading lines for measuring the dispersion of fumigant within said container and an electrical line for powering said fans;
- positioning said reading lines within said container;
- sealing the air exchanger with a means for sealing the air exchanger;
- plugging the front and rear drain holes with a means for plugging holes;
- checking the temperature of the perishable to be fumigated;
- determining the dosage of fumigant to be used in the fumigation process;
- closing and securing the doors of the refrigerated cargo container;
- releasing the fumigant required to fumigate through the gas introduction hose into said container;
- checking with a gas or a halide detector the outside of said container for any fumigant leaks;
- if leaks are discovered, then sealing the areas of said container found to have leaks with a means for sealing the areas found to have leaks;
- re-checking with the gas or the halide detector the areas of the container that were discovered to have leaks;
- if leaks are controlled, then conducting the fumigation process; and
- lastly, aerating the perishable fumigated for the required amount of time needed to clear the container of the fumigant used in the fumigation process.

14. The method for fumigating perishables within the refrigerated cargo container of claim 13, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
15. The method for fumigating perishables within the refrigerated cargo container of claim 13, which further comprises conducting a pressure test of said refrigerated container prior to the application of the fumigant.
16. The method for fumigating perishables within the refrigerated cargo container of claim 15, wherein the refrigerated container is refrigerating the perishable during the fumigation process.
17. A method for fumigating perishables within a refrigerated cargo container, wherein said refrigerated container comprises of a pair of front and a pair of rear drain holes, a pair of doors located at the rear of said container, and a refrigeration system, said method for fumigation comprising:
- checking said container for any damaged areas;
 - if damaged areas found, then sealing said damaged areas with a means for sealing said damaged areas;
 - placing at least one fan within said container;
 - clearing the pair of rear drain holes of said container;
 - inserting through one of the rear drain holes a gas introduction hose, then connecting said gas introduction hose to one of the fans earlier placed within said container or to the fan earlier placed in said container;
 - inserting through the other rear drain hole a plurality of reading lines for measuring the dispersion of fumigant within said container and an electrical line for powering said fans;
 - positioning said reading lines within said container;
 - sealing the rear drain holes with a means for sealing the rear drain holes;
 - plugging the front drain holes with a means for plugging holes;
 - checking the temperature of the perishable to be fumigated;
 - determining the dosage of fumigant to be used in the fumigation process;
 - closing and securing the doors of the refrigerated cargo container;
 - releasing the fumigant required to fumigate through the gas introduction hose into said container;

checking with a gas or a halide detector the outside of said container for any fumigant leaks;

if leaks are discovered, then sealing the areas of said container found to have leaks with a means for sealing the areas found to have leaks;

re-checking with the gas or the halide detector the areas of the container that were discovered to have leaks;

if leaks are controlled, then conducting the fumigation process; and

lastly, aerating the perishable fumigated for the required amount of time needed to clear the container of the fumigant used in the fumigation process.

18. The method for fumigating perishables within the refrigerated cargo container of claim 17, wherein the refrigerated container is refrigerating the perishable during the fumigation process.

19. The method for fumigating perishables within the refrigerated cargo container of claim 17, which further comprises conducting a pressure test of said refrigerated container prior to the application of the fumigant.

20. The method for fumigating perishables within the refrigerated cargo container of claim 19, wherein the refrigerated container is refrigerating the perishable during the fumigation process.

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